

# IMPACT OF GLOBALISATION ON TEXTILE INDUSTRIES: A CASE STUDY OF SOME NIGERIAN INDUSTRIES IN KANO METROPOLIS

*Dr. Nasir Mukhtar Gatawa*

*Prof. C. U. Aliyu*

Department of Economics Usmanu Danfodiyo University, Sokoto

*Sani Musa*

Student of Department of Economics, Usmanu Danfodiyo University, Sokoto

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## Abstract

Using panel data set for 3 selected textile industries in Kano State for the period 1985 – 2005 this study utilized Fixed Effects Regression Model (FEM) and Random Effects Regression Model (REM) to investigate on globalization and textile output in Kano. Results from this research reveal that electricity consumption has significant positive influence on textile output. Another finding of the research is that globalization and exchange rate of naira against United State dollar have negative but significant influence on textile output. The study therefore recommends that Nigerian government should take a second look at her membership of the World Trade Organisation (W.T.O) and selectively engage those policies that will promote her national interest, most especially the imperative need to protect the textile firms. As for the exchange rate, adjustment should be made in the level of the domestic currency based on the interactions of market forces that will facilitate appropriate pricing of the foreign exchange and enhance domestic products which enhance their competitiveness in the export market. Moreover, stable and reliable power supply is necessary to generate optimum production at lower cost so as to enhance utilization of idle resources, expand factor incomes, improve competitiveness and expand overall textile output.

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**Keywords:** Trade openness (globalisation), Textile manufacturing industries, Electricity consumption, exchange rate

## **Background to the Study**

Globalization is a multifaceted process that defies unique identification. Different authors emphasize different views about the causes and effects of globalization partly because of the differences in the concepts, focus and different ideological predisposition about the process itself.

Ninsin (2000) observed that globalisation is about an increasingly interconnected and interdependent world, international trade, investment, finance that have been growing faster than national incomes. It involves technologies that have transformed people's ability to communicate in ways that would have been unimaginable a few years ago. Furthermore, it offers new opportunities for workers in all countries to develop their potentials and support their families through jobs created by greater economic integration.

The colonialists came to Africa and put in place a system of government and trade that replaced the organised procedures and principles of the African people. The need for the expansion in the Production Possibility frontier (PPF) of an economy in order to exploit the benefits associated with international trade, business firms have to operate in order to produce the necessary output to exploit such benefits (Krugman and Obsfeld, 2006). All these are aspects of globalization. In a typical mixed economy such as that of Nigeria, textile firms operate side by side-with local industries ways to produce the required output necessary for the exploitation of the benefits associated with trading in both the domestic and international markets.

Realising the need for a strongly based domestic industrial structure capable of producing at competitive cost to enable the firms to operate successfully, Import Substitution Industrialisation strategy (ISI) was one of the programmes adopted as the cornerstone of Nigeria's industrialisation drive (Ninsin, 200). Considered as well, more accommodating to globalization drive.

The policy direction of ISI was provided to the newly established firms to enable them operate successfully, by producing at a lower unit cost of production in relation to their fully established rivals in the developed countries. The prime policy of the strategy usually centre around the need to protect local infant industries from unfair competition, generate revenue needed to provide social services, moderate consumption behaviour in respect of perceived harmful commodities and provide a base for intensive utilisation of local inputs and resources (Nabudere 2000).

From the early 1960's to 1980's governmental policy and objectives of industrialization are inseparable from the need of solidifying import substitution and its perceived benefits to the individual firm and the economy as a whole.

From 1986 to 2005, being twenty one years after the introduction of SAP in Nigeria, anticipated improvements in production advocates of liberalization emphatically envisaged, failed to materialized. Contrary to their assertion, production in the manufacturing sector in general had been declining, even though the decline in the textile sub-sector of manufacturing is not as severe as for the overall manufacturing sector; (Umar, 2000).

Complete economic deregulation as adopted and implemented in Nigeria contrast sharply with the developmental experiences of newly industrializing countries, especially in south Asia that many developing countries, most owe their successes, manifested in spectacular economic growth rates to guided deregulation and periodic governmental intervention and regulation that facilitated their present export competitiveness and supremacy in textile prior to globalization (Jerome, 1998) and (Stein, 1992).

In an attempt to reverse the negative economic decline resulting from the mono-cultural orientation and spuriously negative external balances, to ensure proper and efficient resource allocation; reduce wasteful government expenditure and provide a base for long term growth; the government of General Ibrahim Badamasi in September 1986, introduced structural adjustment programme (SAP). The major thrust of SAP is economic deregulation and liberalization. Though, several policy measures were show-cased in the package with a view to address fundamental macro economic/stabilization problems that bedevil the Nigerian economy(Obaseki 1997) and (Olisadebe, 1991).

Evidently, globalisation has typical to its downsizing attitude to all underdeveloped economies brought about the domination of the Nigerian economy since its basic export is woven around raw materials. The raw materials provide basis for production and further production in the textile industry where as export of textile raw materials (like cotton) in Nigeria promotes economic diversification abroad and restricts diversification in the domestic firm's settings.

The prospects for the development of textile industry in Nigeria, was identified that it has become very capital intensive, technologically sophisticated, and infrastructurally dependent (especially in regard to the need for reliable sources of electricity and water).

This research therefore intends to evaluate the impact of globalization on manufacturing sector with particular reference to some selected textile industries in Kano Metropolis.

### **Statement of the Problem**

Globalisation has changed the competitive environment around the world. The competitive pressure has been further accelerated by the economic reform measures introduced by the Nigerian governments since the early 1980s. These have created both challenges and opportunities for manufacturing sector in Nigeria. The response of manufacturing small and medium enterprises (SMEs) to those challenges and opportunities are wide and varied. Exports is the single most important mechanism SMEs employ to compete in the international market but many others also follow Foreign Direct Investment, licensing, franchising and distribution network. To be internationally competitive, many SMEs in the sector have entered into co-operative arrangement with other firms both at home and abroad.

Globalization has enhanced technology which aimed at enhancing production efficiency. However, these are associated with many problems in the textile industries. Some of these problems include poor economic conditions in export markets and poor infrastructural facilities which led the textile industries increasingly reliant on foreign enterprises – which became more pronounced and aggravated by the Structural Adjustment Programme (SAP) of 1986 (Jerome, 1998).

The textile industries is faced with many problems among which are the lack of poor legal right to guarantee property right and safety, lack of good governance, corruption, political instability and low access to investible funds due to underdeveloped long-term capital market that matches industrial projects needs. Other issues associated with the sector are the cost of acquiring and implementing the technology, employee-training to go along with what is obtained outside the world, constant power failure which textile industries sector has to supplement with plant and machines.

Difficulties encountered by textile firms ranging from insufficient protection as typified by the presence of smuggled goods in our markets, high cost of foreign exchange, absence of institutional capacity to eliminate smuggling through effective border and part of surveillance, escalating cost of funds in the money market and a legislated minimum wage structure that ballooned their labour cost. Low-quality of locally produced cotton leading to importation of superior quality cotton at a higher cost from our neighboring countries such as Cameroon and Chad and the multiple taxation regimes that retard investment initiative.

It is on this basis that this research set to provide answers to a number of questions as:

1. What are the impacts of globalization on textile industries in Kano metropolis?

2. To what extent does the impact of electricity consumption influences textile output in the study area?
3. How does the impact of exchange rate influence on textile output?

These and other related questions are what this study sets to investigate.

### **Objectives of the Study**

The general objective of this study is to examine the impact of globalization on manufacturing industries with particular reference to some selected textile industries in Kano metropolis. Specific objectives include:

1. To analyze how globalization affects textile industries in Kano metropolis.
2. To investigate the impact of electricity consumption on textile output.
3. To ascertain the impact of exchange rate on textile production.

### **Hypotheses of the Study**

Following the stated research questions and objectives of the study a the following alternative hypotheses have been outlined:

- i. That globalization significantly affects the level of textile output in Kano metropolis of Nigeria.
- ii. That electricity consumption significantly affects the level of textile output in Kano metropolis of Nigeria.
- iii. That exchange Rate significantly affects the level of textile output in Kano metropolis of Nigeria.

### **Scope and Limitations of the Study**

This study is an analysis of the impact of globalization on some selected textile industries in Kano metropolis namely: Kano namely: Universal Textile Ltd., Bagauda Textile Ltd. and Adahama textile and garment Ltd. The study covers the period of 1985 – 2005 (twentyone years).

A complete survey of all the textile firms in Kano metropolis is necessitated in view of the fact that virtually all textile firms in Kano metropolis rely to a significant extent on imported machines, spare parts, Foreign Direct Investments, Innovative and competitive strengths, electronic device (e.g. telecommunication, internet services), devaluation, tariff and inflation and interest rate, hence affected by many elements from this foreign dependency. The textile production is impacted upon by technology transfer, working capital sourcing, infrastructural deficiency and aggregate demand dampening respectively (Anyia, 2001). Wide spread prevalence of imported textile materials in our markets which imperatively makes the textile firms to be protected from dumping resulting from impact of globalization on textile industries in Kano metropolis.

The major limitation of the study is the fact that panel data analysis requires a number of diagnostic test for the model to be used as heterogeneity is taken into consideration unlike cross-sectional data.

## **Theoretical Framework and a Review of Literature**

### **Theory of technology Spillover**

The theory of technology transfer advocated by Kinoshita, (1998) argued that technology transfer to textile firms in host economies is explained in four channels through which technology transfer to domestic textile firms can possibly a Effect the productivity of local textile firms through globalization. These are the contagious limitation effect, competition effect, training effect, background and forward linkages.

Technology transfer through the contagious limitation effect is supported by Kokko (1994). In explaining the contagious effect in relation to globalisation and textile firms it was argued that the difference exists in the levels of technology between foreign and domestic textile firms. Through direct contact with foreign differences, local textile firms can watch and can therefore become productive, this occur through a labour turnover from foreign to local textile firms in which employees from foreign firms are employed by domestic textile firms and thereby bring with them knowledge of needed technologies employed by their former employers.

The competition effect may occur as the entry of foreign firms, lead to more intense competition in the local textile industry and local textile firms are forced to be more efficient in using existing technologies and resources. (Kinoshita, 1998:3) local textile firms may also have to introduce needed technologies by themselves in order to maintain market shares. Increased competition may be able to eliminate monopolistic profits and enhance the welfare of a host country.

Kinoshita, (1998:4) Further explained that “training effect,” as a situation in which on-the-job training may be provided by foreign joint ventures partners, foreign buyers or suppliers leading to a vertical effect on domestic textile firms. Often local textile firms train their own workers to increase product-quality in order to cope with foreign entrants with a competitive edge. The arrival of new technology alone may not create productivity growth in a host country unless the labour force builds up the corresponding skills.

The linkage is encouraged in the presence of “local content – requirements,” which means that foreign firms have to purchase certain – percentage of intermediate inputs in a host country instead of importing from suppliers abroad. A linkage arises when foreign affiliates engage in transactions with local supplies and customers. For instance, when the

cost of communication and transportation is high, then the multinational corporation (MNCs) often choose to purchase intermediate goods from local producers; even in the absence of such direct investment, local suppliers of raw materials are forced to meet demand for higher quality and on-time delivery and to innovate more (Kinoshita, 1998).

### **Theory of Production**

Production theory is usually characterized by the existence of a production function; this represents the technology of a firm of an industry or the economy as a whole. The production function includes a technically efficient method of production. The final output is determined by multiplicity of factors: availability and price of labour, the existing stock of capital, the technology available to firm or industry, price and availability of raw materials, infrastructural facilities such as roads, water, transport and electricity.

Technical knowhow, capital and labour combinations are factors of production under the jurisdiction of the firm. However, certain aspects of governmental policies are as important and decisive in determining productivity and output as the desirable combination of labour and capital are but lie outside the control of the firm. This is because governmental policies strongly influence the level of pattern of income distribution, which ultimately determine the effective demand of the consumers since effective demand of a firm's product is the primary motivation, for production.

### **Empirical Literature**

Empirical evidence on globalization and textile firms' performance is so overwhelming. While there is concern in the literature on the vital positive roles that globalization has in the growth of manufacturing sector, a wide gap exists on textile performance particularly in developing countries and Nigeria inclusive.

Some empirical studies on impact of globalization on manufacturing sector performance and overall output, globalization was found to be a significant determinant of productivity. Studies have revealed that the contributions of Foreign Direct Investments, power, in improving capacity utilization and trade on industrial output and economic growth cannot be overemphasized (Micheal, 2004, Wikipedia 2004, Anyanwu, 2000, World Bank 2002; Anand 2004, Cooper 1995, Portr 1986, Ohmac 1989; Jungnicke 1993, UNEK, 1992, UWTC 1991, UNDP 2003, Clark, 2000).

Pack (1993) in his study of productivity and industrial development in sub-Saharan Africa employed the concept of domestic resources cost (DRC) in analysis of profitability or otherwise of investment in industrial activities. His major findings were that the prevalent high domestic resources cost that seriously reduces the competitive strength of sub-Saharan

export can be strengthened through the technological capacity of firms complemented with conventional price based policy packages. The study though relevant to the needs for improved competitiveness by domestic producers, yet it had failed to clearly establish the relationship between the needed lower domestic resources cost which invariably enhances competitiveness and the impact of productivity in relation to the needed price.

Folashade and Ola (2000) analysed the impact of trade liberalization and technological acquisition on the manufacturing sector in Nigeria. They employed a model that measures the effect of technological development on the dependent variable, while size of the firm, export volume, age of the firm, capacity- utilization, trade liberalization and infrastructure were used as explanatory variables. Their conclusion was that liberalization had forced most firms to undertake some technological acquisition as a result of widespread access to capital equipment as a strategy for survival, though some firms had to fold up, hence raising the economic efficiency of others due to the enlarged resources released to them.

Tayeb (2000) In a study of the manufacturing firms in developing countries and their performance identified that: market size access to textile inputs, human capital, infrastructure, governance, and plant size and scale efficiency as the most vital factors that explained the positive expansion or decline of textile output in Africa. He concluded that, manufacturing firms perform fairly in most of the developing countries due to market situation that tolerate inefficient firms leading to high cross firm productivity, dispersion, existence of small group of entrenched oligopolists who exploit monopoly power in product markets and are both unwilling and unable to grow, leaving virtual scale economies unexploited.

The findings of Ninsin (2000) suggest that 13 percent of firms surveyed had already set up offshore production facilities and over 50 percent were considering offshore production in the near future. A study conducted by Anyanwu (2002) showed that manufacturing capacity utilization rate has fallen from an average of 70 percent from the period of 1990 to 30 percent in 1996 – 1998 owing to infrastructural decline – failures and other problems inherent in the economy. Vehemently therefore, infrastructural failures and decline have been part of sector and economic performance which has significant effects on nation's GDP growth..

Study conducted by World Bank (2006) indicates that Nigeria ranks within the first quintile of the 155 countries in the ability of business to hire and fire. It ranks in the second quintile on getting credit, protecting investors, and closing a business, dealing with licenses and enforcing contracts. The worst rankings are in registering property (152) and trading across borders (139) with both in the fifth quintile.



Closely related to this is the fact that, previous researches use cross-sectional data in investigating the impact of globalization on domestic firms. This and other panel data in investigating the impact of globalization on domestic firms. These is because previous researchers using cross sectional data in investigating the impact of globalization on domestic firms failed to overcome important data restrictions and could not access firm level data. The danger as explained by George and Greenaway (2004:176) is that cross-section data, particularly if aggregated at the sectoral level failed to control for time – variant differences in productivity across sectors that might be correlated with foreign presence without being caused by it. Thus, coefficients on cross-section estimates are likely to be biased.

Gorg and Strobl (2003) have argued that panel data using firm-level data are the most appropriate estimating framework for two reasons. First they permit investigation of the development of domestic firms' productivity over a large time period, rather than at one point in time. Secondly they allow investigation of spill over after controlling for other factor.

### **Methodology of the Study**

#### **Data Collection**

This study will make use of secondary sources of data. In view of this reason, panel data from three textile firms for a period of twenty one (1985-2006) years would be sourced from online and hard copies of publications from, the Regional Programme on Enterprises Development (RPED) survey conducted by World Bank (2003), census of industrial production (CIP) (1995-2006), The Central Bank of Nigeria Statistical bulletin (2006) and United Nation Development S Report (2003). The choice of the panel data set was to enable the study benefit from the advantage of time trend, interaction between time and the inputs and technical change components

#### **Sampling Techniques**

In view of the inability to conduct a census, the study would employ the use of adequate sampling techniques that will be used to select some industries from an available list of textile industries in Kano. On this note a simple random sampling technique would be used to select three textile firms from the available list of textile firms operating in Kano state. This would be done using the statistical package for Social Sciences (SPSS) computer software version 6.0, the selection of which was consequent upon the fact that all the textile firms use the same type of technology for production. It is envisaged that by studying firms using the same type of technology, technology as a variable can be held constant when other variables are changing.

## **Variable Measurement**

With respect to the literature; both dependent and independent variables have been identified. Various studies (AMC, 1993, Clarke et al, 2002, Kokko, 1994, World Bank, 2000, 2003 and CSO, 1991, 2001) have identified key variables that stand as a proxies to a host of variables related to the present study.

### **Dependent Variable**

According to a number of studies, the level of production of a textile firm can be used to measure the level performance of the firm. According to Kokko (1994) the average output of a textile firm could taken as a proxy to production. This study in line with Clarke et al (2002) would employ the use of production output as the dependent variable.

### **Independent Variables**

The present study hopes to analyze the relationship between globalization and textile firm performance in Nigeria. In line with the above, a number of independent variables have been identified as has been observed in the literature. Anand (2004) argued that electricity consumption and exchange rates are the major factors that affect or otherwise the outcome of a textile firm.

### **Electricity Consumption**

According to Anand (2004), the annual power consumption of a firm can be used to proxy the overall electricity consumption of the said firms. This is calculated as % of total Industrial power consumption in(mega watts per hour)

### **Exchange Rate**

According to Anya (2001) the change in a country's currency value is a means to measuring a nation's exchange rate. This is calculated as exchange rate of Naira vs. Dollar.

### **Globalization**

According to Onyekpe (2001) globalization can be measured by the level of country's trade openness. This is calculated as the annual percentage change in the ratio of the sum of exports and imports to GDP as a proxy for trade openness. On this note, the present study would employ the use of trade openness as a proxy for globalization

### **Method of Data Analysis**

A panel-data set would be analysed using the STATA econometric software version 9.1. In order to avoid any form of model misspecification adequate panel approaches would be followed in analysing the data set. According to Yaffee (2005) the fixed effects and random effects models are the most commonly used in analysing panel data. An example of the fixed effects model is specified as:

$$Y_{it} = \beta_1 X_{it} + V_{it} + E_{it} \quad (1)$$

The random effects model can be specified as;

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 X_{2it} + e_{it} \quad (2)$$

However, the choice of any of these models to estimate a panel model depends on running a hausman model specification test.

### Model Specification

From the literature a very notable and related model to the present study is that of Ajayi (2002) and Ajagu (2002). In trying to access the relationship between globalisation and textile industries the authors regressed trade openness as a proxy for textile output on a host of globalisation and other control variables. Adopting this pattern, the present study specified the following model;

$$OM_{it} = \Phi_0 + \Phi_1 TRDOPNS_{it} + \Phi_2 ELC_{it} + \Phi_3 EXCHRAT_{it} + U_{it} \quad (3)$$

Where:

OM = TEXTILE OUTPUT

TRDOPNS = TRADE OPENNESS

ELC = ELECTRICITY CONSUMPTION

EXCHRAT = EXCHANGE RATE

$U_{it}$  = The stochastic disturbance term

$\Phi_{it}$ s = Parameters of the Model

### Hausman Specification Test Model Selection

According to Yaffee (2005) the best linear unbiased estimator (BLUE) for panel data depends on the outcome of series of diagnostic tests. The Hausman Model specification test is in this regard the most relevant for recommending the best model (Yaffee, 2005). This study would therefore employ the use of this test to choose either the Fixed-Effects or Random-Effects model.

### Descriptive Analysis and Interpretation of Results

As shown in the table 4.1 below, an attempt was made provide an illustrative position of the Minimum and Maximum values of the explanatory variables used in the regression analysis.

Table 1: Summary of Data on Variables used for the Research.

S/N	Variable	Obs	Mean	Std. Dev.	Min	Max
1	OM	61	232665.4	261507.8	1267	900000
2	GBL	60	58.118	34.59519	27.85	132.81
3	ECNSN	63	24.49048	6.317557	11.5	36.2
4	EXRAT	63	47.99238	50.7101	.89	133.5

**Source:** Computed with STATA 10.0 using data from CBN Annual Report And Statement of Account(First Half of 2005,2006) Statistical Bulletin(2004),National Bureau of Statistics And Ganiyu Kayode Sani(2006)CBN Bullion.

Table 1 depicts the data used for the study. As can be observed, most of the textile industries in Kano metropolis are characterized by different levels of total output. From the table, the average actual production for all the textiles under the study is 232665.4 million meters of fabrics. This is against a minimum value of 1,267.00 metric tones and a maximum value of 900,000 meters of fabrics characterised with a standard deviation of 261507.4.

As for globalization which can be measured through trade openness, the study reveals an average of 58.12 percent and a minimum and maximum of 27.8 and 132 percent respectively. The percentage of total Industrial power consumption (in mega watts per hour) reveals a mean of 24.49048 mega watts per hour for the period under study. This is against the minimum value of 11.5 percent and maximum of 36.2 percent.

For the Exchange Rate, the annual exchange rate of the Naira against the United States Dollar stood at N47.99, with a minimum of exchange rate of eighty nine kobo to one US Dollar and maximum exchange rate of ₦133.50 to one United States Dollar.

Table 2 displays the results of the panel data regression analysis for selected textile industries in Kano state. The Hausman specification test upheld the null hypothesis suggesting that RE is not appropriate relative to FE. Therefore, FE model is suitable for adoption in this analysis (see appendix) for details.

**Table 2: Regression Results for Selected Textile Industries in Kano Metropolis**

<b>Dependent Variable =TEXTILE OUTPUT</b>			
Independent Variable	Coefficient Estimates (and t-ratios)		
	OLS Regression	FE Regression	RE Regression
GBL	-1650.674 (-2.81)***	-1850.674 (-4.81)***	-1650.674 (-2.81)***
ECSNP	9153.591 (2.07)***	8553.551 (3.07)***	9153.591 (2.07)***
EXRAT	-1669.469 (-2.89)***	-1709.462 (-4.89)***	-1669.469 (-2.89)***
Constant term 18303.2	183802.2 (1.01)***	147802.2 (22.46)***	183802.2 (1.01)***
R <sup>2</sup>	0.2913	0.4934	0.2913
F	52.59***	17.53***	52.59***
Significant at 1% (***), 5% (**) and 10(*)			

Source: Computed with STATA 10.0 using data from CBN Annual Report And Statement of Account(First Half of 2005,2006) Statistical Bulletin(2004),National Bureau of Statistics And Ganiyu Kayode Sani(2006)CBN Bullion.

Using the basic data for a number of the variables captured in OLS, Fixed and Random Effects models, the regression results reveal a number of findings. Like OLS, the

fixed effect regression posits similar result with all the parameters estimates of ELC having positive and significant impact on textile output. Globalisation as annual % change in the ratio of the sum of Exports and Imports to GDP and annual exchange rate was found to have a negative but significant impact on textile output.

The F-value of 17.53 (OLS) in the analysis of variance shows that the model estimated by the regression procedure is adequate. This indicate that at least one coefficient is different from zero. The t-ratio for the estimated coefficient of Globalisation (trade openness), electric consumption and exchange rate of naira against US dollar of -4.81, 3.07 and - 4.89 respectively are both significant at 1% indicating that the predators ( Globalisation, Electricity consumption and Exchange rate) are significantly related to the dependent variable ( Textile Output).

In addition, the results of the RE shows the same behavior F-value of 52.59 and t-ratio of the explanatory variables as -2.81, 2.07 and -2.89 respectively, the model proved to be adequate and the explanatory variables one positive and two negatively associated with the dependent variable (Textile output).

The  $R^2$  results for the fixed effect reveal an average of about 0.49, indicating that a 49% variation in total output can be attributed to the join influence of all the variables captured in each of the models. While Random effect models reveal an average  $R^2$  of 0.29, therefore, 29% of the variation in total output is as a result of the joint influence of all the independent variables captured in the models.

Following the diagnostic test, result of Hausman specification selected FE model as more appropriate than RE model because the P value indicates the significance of the test at 5% level, leading to acceptance of hypothesis that FE model is more appropriate than RE model.

### **Discussion of Regression Results for the impact of globalization on manufacturing output**

In this study, the number of textile firms in northern Nigeria both operational and non operational stood at forty one. While Kano state has the largest share of the textile firms totaling twenty seven. A significant number of these firms are not operating as at June 2005 due to multiple problems that afflicted not only textile firms but most manufacturing concerns.

As outlined in the methodology of the study trade openness as a proxy for globalisation has been regressed on textile output and other control variables. The first step was to run the fixed-effects and random-effects regression models. However, the choice of

either of the models was determined by a particular econometric test as earlier discussed. Therefore, as indicated in the Hausman specification test the random-effects model has been adopted for this study.

From the results in table 4.2, it can be observed that one of the dominant features of manufacturing concerns in Nigeria is their heavy reliance on imported inputs and accessories for their operation of which textile firms in Kano are not exception. This over reliance had made them highly susceptible to exchange rate shocks that have a negative impact on their operations. This observation strongly tallies with the findings of Jerome A et al (1998) and Gherzi(2003).

Results obtained in this research indicates that, depreciation of the Naira exchange against major currencies of the World such as United State Dollar usually results in escalation for the firms leading to reduced capacity utilization. This is due to the fact that as the value of the Naira falls relative to the foreign currencies, the quantum of funds required for the purchase of similar amount of the foreign exchange increases in Naira terms which may not be sourced easily due to the high cost of funds in the money market.

In addition, trade openness as measurement of Globalisation was revealed to have had a negatively significant impact on textile output in both models. Therefore, as the level of exports increases it is expected that economic development through imports decreases. These findings are in line with Rodrik (2000), Stein(1992) and Streeten (1993) and are the basis for the rejection of the null hypothesis as well as a confirmation of the expectations of the study. However, these findings contradict that of Lewis (1980), Petrakos and Arvanitidis, (2008) and Tridico (2006) who report a positive relationship.

This disparity may have been as a result of the cross-section data set used in their study against the panel data set used in the present study.

On the other hand, electricity consumption using both fixed and random effects model was seen to have a positive and significant impact with textile output, therefore, the acceptance of the null hypothesis. However, these finding contradicts the finding of Gherzi (2003) and World Development Report,(2001) which reveal a negative impact of generated electricity cost on textile output. This difference may be as a result of the varying peculiarities in the sample size and sample of both studies.

For the R<sup>2</sup> it can be observed that for all the models the highest value is 0.49 while the lowest is 0.29. Following these revelations, 49% (for the highest) and 29 % ( for the lowest) variation can be attributed to the joint influence of all independent the variables

captured in the respective models. For the adequacy of the models results reveal that all the models were adequate with F value that were statistically significant.

### **Conclusions/Suggestions**

Several conclusions were strongly arrived at from this research. On the basis of this study, the following conclusions are drawn:

Globalisation through trade openness goes a long way in reducing the textile output because an increase in the exports of textile output does translate into reducing imports of textile output. However, Globalisation does have a negative significant impact on textile output.

Electricity consumption positively affects textile output. This positive impact may be as a result of lack of stable and constant power supply which textile firms had to provide an alternative power for their operations.

Exchange Rate has a negatively affects the textile output. This may be as a result of dependency nature of the Nigerian Textile firms in terms of over-relying on imported inputs, spares, raw materials and other accessories lend to the exposure to exchange rate shock. Inference of the study depicts that globalization does indeed play a role in shaping the outcome of the textile Industries in Kano.

A research focusing on the impact of globalisation on textile performance is relatively new. This is because previous studies have analysed the impact of globalisation to manufacturing sector taken capacity utilisation and exchange variation along (Berdhan and Kletzer, 1984).

The present research or study investigated the impact of trade openness, electricity consumption and exchange in 3 selected textile industries in Kano state. Moreover, in the course of the study so many short comings were observed, for instance, trade openness as a measure of globalisation had to be expunged from the study owing to lack of data. This single act has, to some extent, reduced the quality of the work, and the fact that data beyond the year 2005 was difficult to come by has made the study not reflect on the trend of events in recent times.

Finally, there is need to extend the period of the study to incorporate current happenings. In addition, there may be need to carry out this study to other areas or state where different textile industries are located and this vehemently would enable researchers to discover the impact of globalisation in other state that share the same experiences.

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**Appendix I**

```
. xtset compid year, yearly
      panel variable:  compid (strongly balanced)
      time variable:   year, 1985 to 2005
      delta: 1 year
```

```
.
. summarize apmt cgdg tipcmgw aexrt
```

Variable	Obs	Mean	Std. Dev.	Min	Max
apmt	61	232665.4	261507.8	1267	900000
cgdp	60	58.118	34.59519	27.85	132.81
tipcmgw	63	24.49048	6.317557	11.5	36.2
aexrt	63	47.99238	50.7101	.89	133.5

```
xtreg apmt cgdg tipcmgw aexrt
```

```
Random-effects GLS regression           Number of obs   =    60
Group variable: compid                  Number of groups  =     3
```

```
R-sq:  within = 0.0000                Obs per group: min =    20
      between = 0.0000                      avg =    20.0
      overall = 0.2913                      max =    20
```

```
Random effects u_i ~ Gaussian           Wald chi2(3)     =   52.59
corr(u_i, X)      = 0 (assumed)         Prob > chi2      =   0.0000
```

	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
cgdp	-1650.674	586.826	-2.81	0.005	-2800.832 -500.5163
tipcmgw	9153.591	4417.922	2.07	0.038	494.6223 17812.56
aexrt	-1669.469	577.692	-2.89	0.004	-2801.724 -537.2132

```

_cons | 183802.2 182579.1 1.01 0.314 -174046.2 541650.6
-----+-----
sigma_u | 200836.72
sigma_e | 149757.64
rho | .64266456 (fraction of variance due to u_i)
-----

```

. estimates store ols

. xtreg apmt cgdg tipcmgw aexrt, fe

```

Fixed-effects (within) regression      Number of obs   =    60
Group variable: compid                Number of groups =    3

```

```

R-sq:  within = 0.0000                Obs per group: min =    20
      between = 0.1729                  avg =    20.0
      overall = 0.4934                  max =    20

```

```

                                F(3,54)    =   17.53
corr(u_i, Xb) = -0.0000          Prob > F      =   0.0000

```

```

-----+-----
apmt |   Coef.   Std. Err.    t    P>|t|   [95% Conf. Interval]
-----+-----
cgdp | -1850.674   486.826   -4.81  0.007   -5627.189   -474.1589
tipcmgw | 8553.551  5317.922    3.07  0.043    426.1899  18010.99
aexrt | -1709.462   527.692   -4.89  0.006   -5927.672   -511.266
_cons | 147802.2  247031.9   22.46  0.198   -8649.64   466554.1
-----+-----

```

```

sigma_u | 203609.32
sigma_e | 149757.64
rho | .64893692 (fraction of variance due to u_i)
-----
F test that all u_i=0:   F(2, 54) =   36.97          Prob > F = 0.0000

```

. estimates store fixed

. xtreg apmt cgdg tipcmgw aexrt, re

Random-effects GLS regression                      Number of obs    =     60  
Group variable: compid                              Number of groups =     3

R-sq: within = 0.0000                              Obs per group: min =     20  
              between = 0.0000                              avg =     20.0  
              overall = 0.2913                              max =     20

Random effects u\_i ~ Gaussian                      Wald chi2(3)       =     52.59  
corr(u\_i, X)       = 0 (assumed)                      Prob > chi2       =     0.0000

```
-----
      apmt |   Coef.  Std. Err.   z  P>|z|   [95% Conf. Interval]
-----+-----
      cgdg | -1650.674   586.826  -2.81  0.005  -2800.832  -500.5163
    tipcmgw |  9153.591  4417.922   2.07  0.038   494.6223  17812.56
      aexrt | -1669.469   577.692  -2.89  0.004  -2801.724  -537.2132
      _cons | 183802.2  182579.1   1.01  0.314  -174046.2  541650.6
-----+-----
    sigma_u | 200836.72
    sigma_e | 149757.64
      rho   | .64266456 (fraction of variance due to u_i)
-----
```

. estimates store random

. hausman fixed ols

---- Coefficients ----

	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
--	-----	-----	-------	---------------------

	fixed	ols	Difference	S.E.
cgdp	-1850.674	-1650.674	-9.09e-13	7.63e-06
tipcmgw	8553.551	9153.591	1.27e-11	.
aexrt	-1709.462	-1669.469	6.82e-13	.

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\chi^2(3) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 0.00$$

Prob>chi2 = 1.0000

(V\_b-V\_B is not positive definite)

hausman fixed random

---- Coefficients ----				
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fixed	random	Difference	S.E.
cgdp	-1850.674	-1650.674	-9.09e-13	0
tipcmgw	8553.551	9153.591	1.64e-11	.
aexrt	-1709.462	-1669.469	2.05e-12	.

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\chi^2(3) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 0.00$$

Prob>chi2 = 1.0000

(V\_b-V\_B is not positive definite)

## **Appendix II**

### **List Of Randomly Selected Textiles Industries In Kano**

<b>Name</b>	<b>Locational Address</b>
1. Universal Group Company	
a. Universla Tetxtile Ltd	No. 1 Independence Road Bompai Kano
b. Universal Spinners Ltd	No. 1 Independence Road Bompai Kano
c. Holborn Ltd	No. 1 Independence Road Bompai Kano
2. Bagauda Tetxtile Ltd	No. 17 Nababa Badamsi Road, Bompai
3. Adahama Textile And Garment No. 171 Mission Road Bompai Kano Textile Ltd	

## Appendix II

### List Of Textiles Firms In Kano State

Name	Locational Address
4. Universal Group Company	
d. Universla Tetxtile Ltd	No. 1 Independence Road Bompai Kano
e. Universal Spinners Ltd	No. 1 Independence Road Bompai Kano
f. Holborn Ltd	No. 1 Independence Road Bompai Kano
5. Gaskia Textile Mill Ltd	No. 585 Nababa Badamsi Road, Bompai Kano
6. Bagauda Tetxtile Ltd	No. 17 Nababa Badamsi Road, Bompai
7. Kano Textile Printers Ltd	No. 5 Independence Road Bompai Kano
8. Kano Textile Industry Ltd	No. 28 Dantata Bompai Kano
9. Northern Tetxtile Manufacturers	No. 9 Independence Road Bompai Kano
10. Dangote Tetxtile Ltd	Maimalari Road, Bompai (Near Holborn)
11. Nigerian Braiding And Braiding And <b>Brocade Manufacturing Company Ltd</b>	No. 12 Nababa Badamsi Road, Bompai Kano
12. Nigerian Spinners And Dyers Ltd Kano	No. 6 Independence Road Bompai Kano
13. Terytex Nigerian Ltd Kano	No. 134 Independence Road Bompai
14. Fahid Dayek & Company Ltd	No. 1327 Independence Road Kano.
15. Lakhi Textile Industry Ltd	No. 38/39 Sharada Phase Ii Kano
16. Nornit Nigerian Ltd	No. 18 Dantata Road, Bompai Kano
17. Ila Indusrty Ltd	Challawa Industrial Area, Kano
18. Adahama Textile And Garment Textile Ltd	No. 171 Mission Road Bompai Kano
19. Keyfad Spinner's Ltd	Sharada Industrial Estate Kano
20. Angel Spinners Ltd	Sharada Industrial Estate Kano
21. Agro Ventures Ltd	Hadejia Road Kano
22. Daje Industrial Ltd	Sharada Industrial Estate Kano
23. Leader Textile Ltd	Gwammaja Kano
24. Sutura Textile Ltd	No. C-2 St. Louis Avenue Bompai Kano
25. Dibo Industry Ltd	No. 80/82 Tafawa Balewa Road Bompai
26. Madratex Ltd	No.50 Tafawa Balewa Road Kano
27. Garment Manufacturing Company Ltd	Plot 18 Sharada Industrial Estate Kano
28. Tropical Tarpaulin Nigeria Ltd	No.167 Mission Road Bompai Kano
29. Integrated Fibres Ltd	Independence Road Bompai Kano
30. Vijlaturi Textile Nig. Ltd	20/30 Sharada Phase Ii Kano
31. Africa Textile Manufacturing Ltd	Challawa Industrial Area Kano.